

REMARKS

Applicants thank the Examiner for the attention accorded the present Application in the April 23, 2003 Office Action, in which claims 1-4, 6-15, 17-29 and 31-38 were pending. In that Action, claims 21-29 and 31-38 were rejected under 35 U.S.C. § 112, second paragraph; and claims 1-4, 6-15 and 17-20 were rejected under 35 U.S.C. § 102(b) as being anticipated by DeWitt. However, the Examiner noted that claims 21-29 and 31-38 would be allowable if rewritten or amended to overcome the 35 U.S.C. § 112, second paragraph rejection.

By the foregoing amendments, claims 1, 14, 21 and 33 have been amended to more clearly specify the present invention. No new matter has been added, and the amendments are fully supported throughout the specification, as more fully described below.

Claims 1-4, 6-15, 17-29 and 31-38 are now currently pending in this Application. Based on the above amendments, Applicants respectfully submit that the rejections to claims 1-4, 6-15, 17-29 and 31-38 have been overcome. Reconsideration of this Application is respectfully requested in view of the foregoing amendments and the following remarks.

35 USC § 112, second paragraph rejections

Claims 21-29 and 31-38 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner noted that claims 21-29 and 31-38 would be allowable if rewritten or amended to overcome this 35 U.S.C. § 112, second paragraph rejection.

Claims 21 and 33 have been amended as necessary to more clearly describe the screening process of Applicants' invention. No new matter has been added, and the amendments to the claims are fully supported by Applicants' specification. For example, both of these claims have been amended to claim "allowing the gas to react with the plurality of liquid reactant systems for a predetermined amount of time; and evaluating results thereof in an effort to discover potentially effective reactants, catalysts and reaction conditions." These amendments are supported by Applicants' specification at

page 2, lines 24-26, and at page 4, lines 8-10, among other places. Applicants submit that these amendments overcome this rejection, therefore, it is respectfully requested that the Examiner withdraw this rejection.

35 U.S.C. § 102(b) rejections

Claims 1-4, 6-15 and 17-20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by DeWitt. Applicants respectfully disagree with the Examiner's conclusion and submit that the present invention is not anticipated, nor even suggested, by DeWitt.

As presently claimed by Applicants, Applicants' invention comprises "[a]n apparatus for the rapid screening of potential reactants, catalysts or reaction conditions, the apparatus comprising ... a head plate positioned to provide a *sealed pressurized headspace* ... wherein a reaction occurs within each substrate reservoir, and *wherein said apparatus is structurally capable of being operated at temperatures up to at least about 200 °C and at pressures up to at least about 50 atmosphere.*"¹ These amendments are fully supported by Applicants' specification at page 4, lines 8-10 and 23-26, among other places.

Applicants' apparatus is specifically and intently designed to carry out high pressure reactions (up to about 50 atmosphere). From a technology perspective, this is significantly different from the DeWitt apparatus. The reactions Applicants carry out in their apparatus specifically require high pressure in order for the reactions to occur, and, in many cases, the components of the headspace gas are in fact key reactants (i.e., in one example, carbon monoxide provided in the gas headspace dissolves into the liquid phase and participates in the reaction). Applicants' entire apparatus was designed around the need to provide high pressure and high temperature reaction conditions, and in fact, none of Applicants' reactions could be carried out in DeWitt's apparatus.

In contrast, DeWitt does not disclose an apparatus for the rapid screening of potential reactants, catalysts or reaction conditions at temperatures up to at least about 200°C and at pressures up to at least about 50 atmosphere. Although the DeWitt apparatus mentions the capability for normalizing pressure differentials, the DeWitt apparatus is NOT designed for high-pressure reactions, and can only be used for reactions

at ambient pressures. The sealability of the DeWitt headspace is intended only to control the nature of the gas in the headspace (i.e., insert gas, or dry inert gas for moisture-sensitive reactions). The pressure equalization features of DeWitt are provided only to equalize any MINOR pressure variations that may develop within the reactor system during the course of a reaction (i.e., due to the evolution of any gaseous products from the reactions).² The only other application of gas pressure in the DeWitt apparatus is to help expel the liquid solvents from the reaction tubes after the reaction is complete, which is accomplished with a relatively low gas pressure.³ Furthermore, some of the materials that the DeWitt apparatus is constructed with are incompatible with the high-pressure operation (i.e., glass, plastic, etc.) of Applicants' apparatus.⁴ In fact, the DeWitt apparatus could not even be modified to accommodate high-pressure reactions like Applicants' since the entire design, materials of construction, and additional features (i.e., robotic liquid delivery and sample removal) are incompatible with such high-pressure operation. Therefore, DeWitt does not anticipate, nor even suggest, an apparatus for the rapid screening of potential reactants, catalysts or reaction conditions at temperatures up to at least about 200°C and at pressures up to at least about 50 atmosphere, as recited in independent claims 1 and 14 of Applicants' invention.

Based on the above arguments and amendments, Applicants respectfully submit that independent claims 1 and 14 of the present invention are patentably distinguished from DeWitt. As claims 2-4 and 6-13 depend from claim 1, and claims 15 and 17-20 depend from claim 14, the discussion above applies to these claims as well. Further, these claims each include separate novel features. Thus, Applicants respectfully request allowance of pending claims 1-4, 6-15 and 17-20.

¹ Applicant's spec., independent claims 1 and 14 (emphasis added).

² DeWitt, col. 17, lines 9-12; col. 23, lines 1-9; and Fig. 16 (openings 260).

³ DeWitt, col. 13, lines 34-40; col. 14, lines 5-12; and col. 14, lines 42-48.

⁴ DeWitt, col. 8, line 43 to col. 9, line 9.

CONCLUSION

Applicants respectfully submit that the amendments to the claims successfully traverse the rejections given by the Examiner in this Office Action. For the above reasons, it is respectfully submitted that the claims now pending patentably distinguish the present invention from the cited reference. Allowance of pending claims 1-4, 6-15, 17-29 and 31-38 is therefore respectfully requested.

As this reply is being timely filed within two (2) months from the mailing date of this Office Action, Applicants believes that there are no fees due for the filing of this response. If this is incorrect, however, the Commissioner is authorized to charge any additional fees that may be due, or credit any overpayment, to **Deposit Account No. 04-1448**.

Should the Examiner have any questions, or determine that any further action is necessary to place this Application into better form for allowance, the Examiner is encouraged to telephone the undersigned representative at the number listed below.

Respectfully submitted,

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